

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: LUMARK

Report Number: P270386

Luminaire Tested: **NAV-AF-02-D-UNV-T3-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270386
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (p24135)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-02-D-UNV-T3-7027-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6974.4 lumens
Efficiency: N/A
Efficacy: 105.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G2

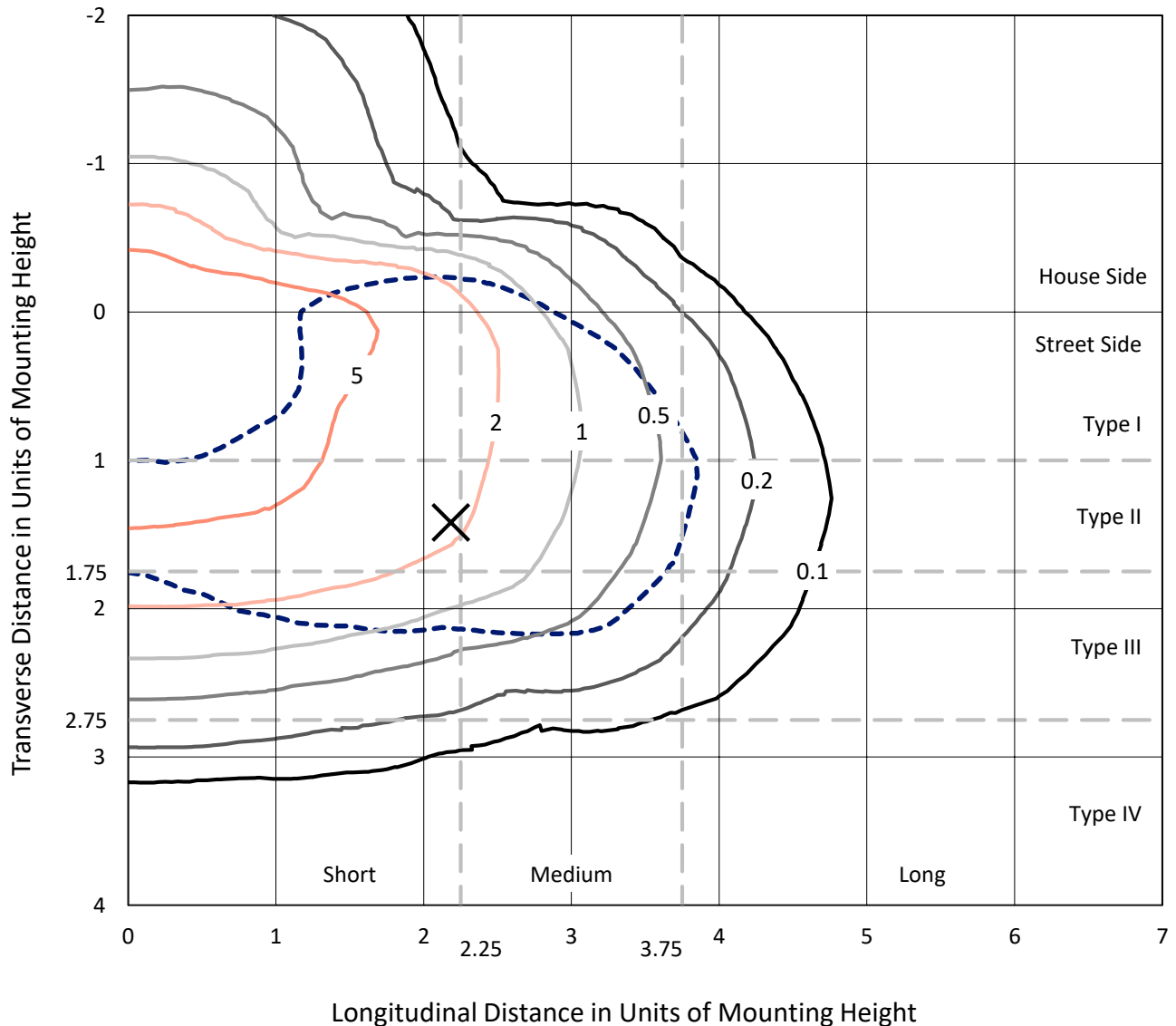
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

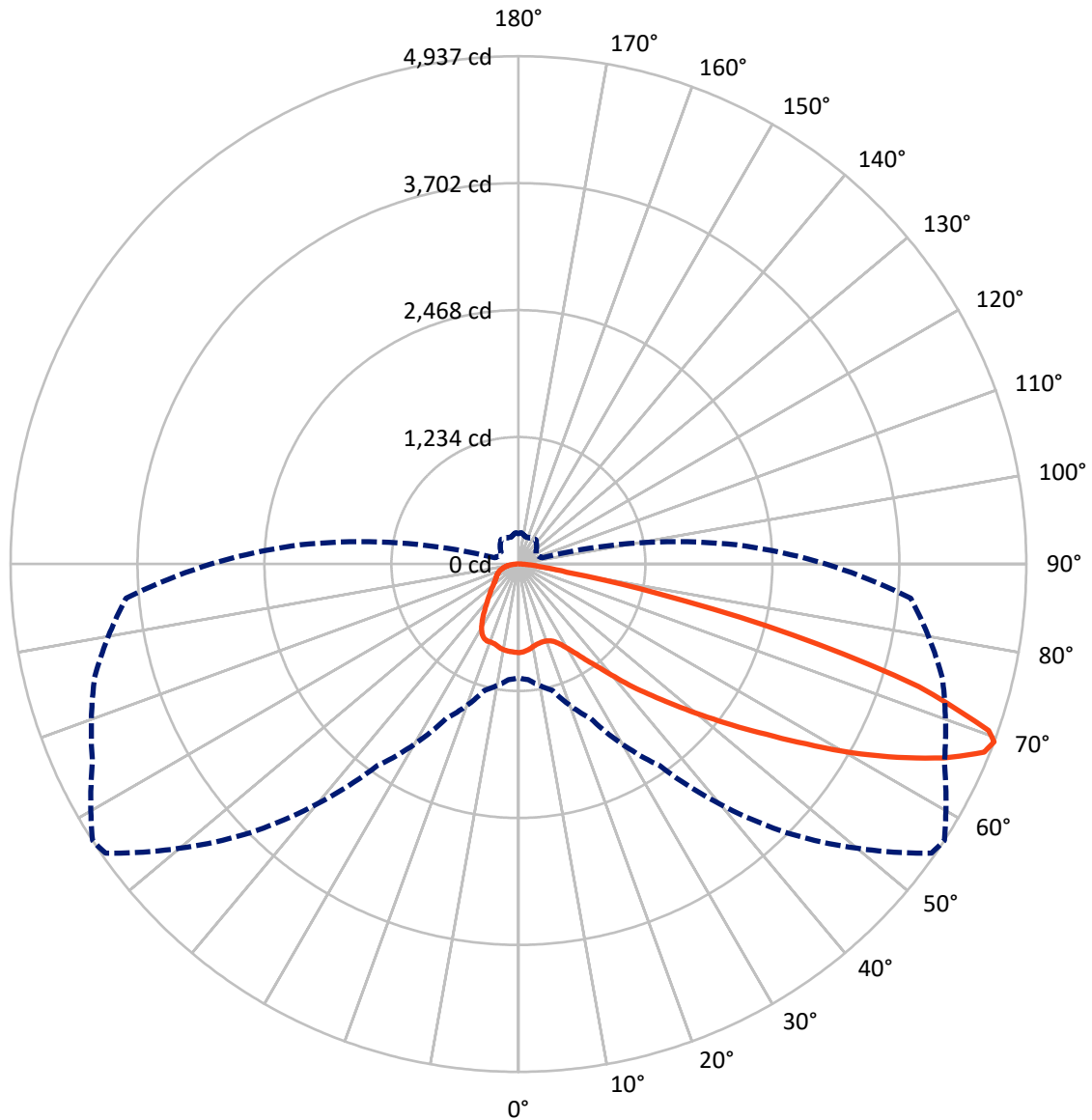
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.8 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 57-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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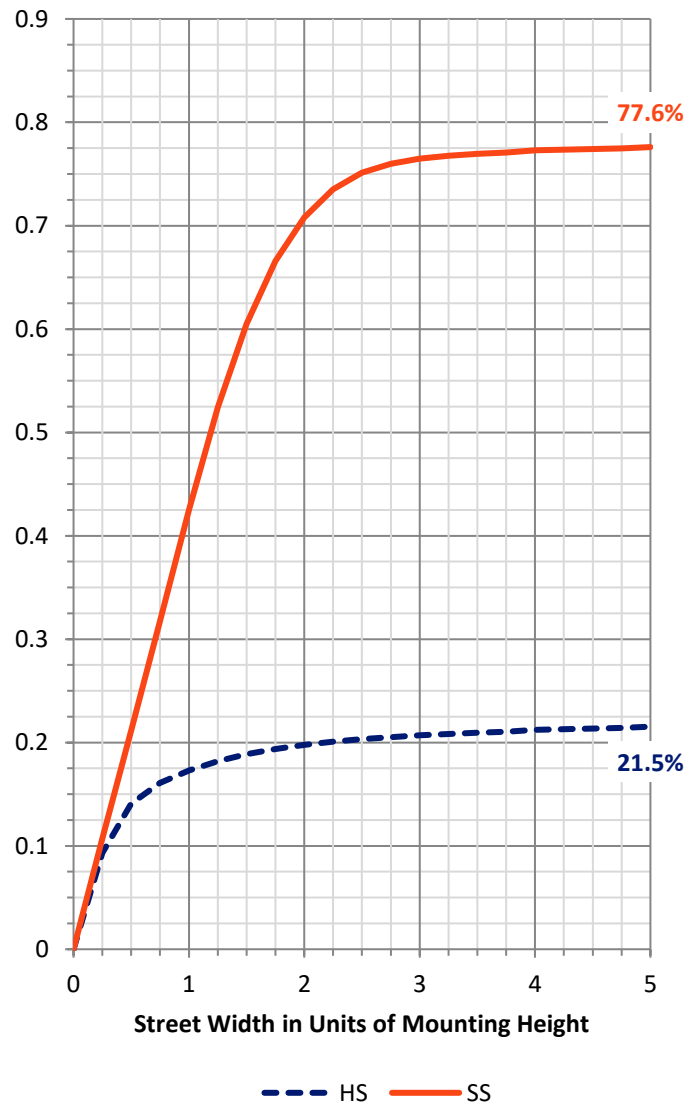
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1539.0	0.0	1539.0
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	5435.4	0.0	5435.4
	% Fixture	77.9	0.0	77.9
Total	Lumens	6974.4	0.0	6974.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.7	1.2
10°-20°	229.4	3.3
20°-30°	381.6	5.5
30°-40°	623.1	8.9
40°-50°	1051.7	15.1
50°-60°	1635.9	23.5
60°-70°	1948.7	27.9
70°-80°	907.9	13.0
80°-90°	115.5	1.7
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	6974.4	100.0
0°-180°	6974.4	100.0



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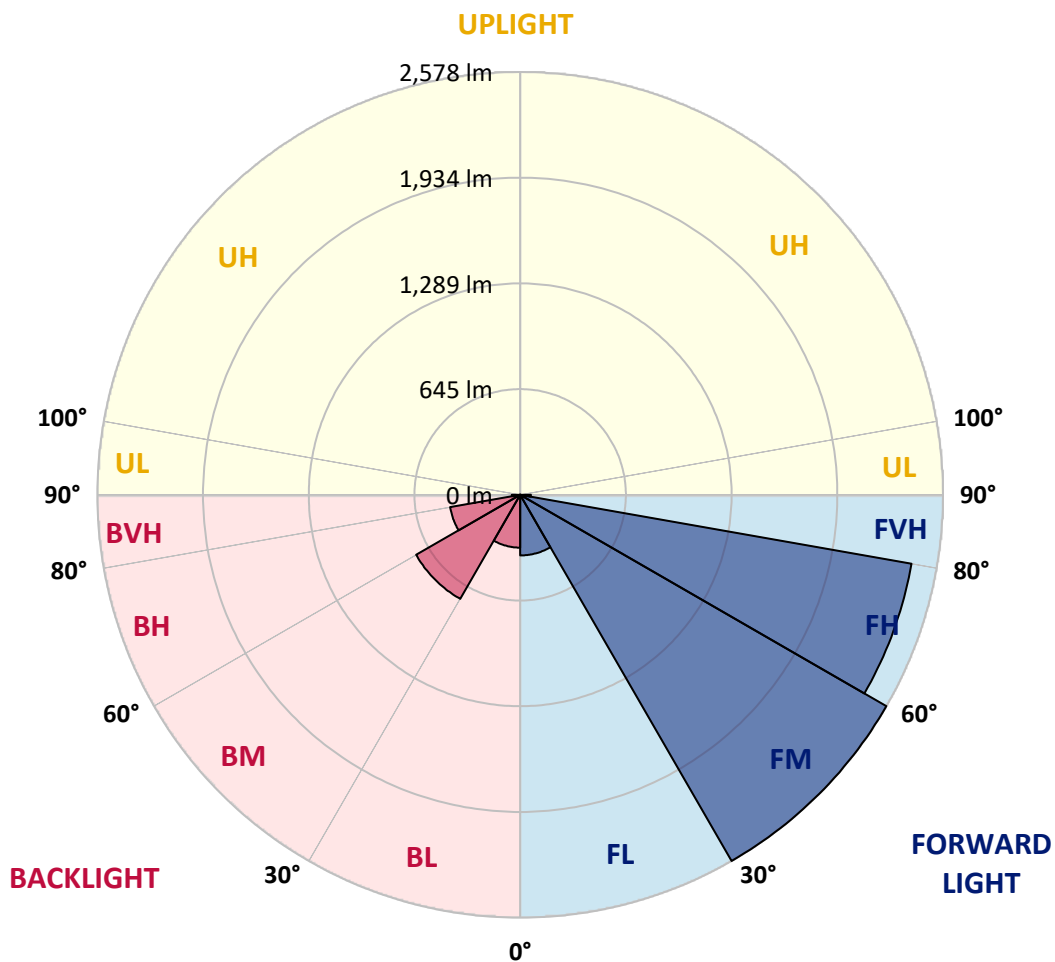
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	369.4	5.3			
FM	(30°-60°)	2578.2	37.0			
FH	(60°-80°)	2422.9	34.7			G2/5000
FVH	(80°-90°)	64.9	0.9			G1/100
BL	(0°-30°)	322.3	4.6	B1/500		
BM	(30°-60°)	732.5	10.5	B1/1000		
BH	(60°-80°)	433.7	6.2	B1/500		G1/500
BVH	(80°-90°)	50.6	0.7			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	861.7	861.7	861.7	861.7	861.7	861.7	861.7	861.7	861.7	861.7	861.7
2.5°	856.9	856.9	859.0	859.0	859.0	858.2	855.5	856.4	854.6	853.3	851.1
5°	839.5	840.4	843.0	843.9	845.2	845.7	845.7	845.2	845.7	845.7	844.3
7.5°	815.3	816.2	819.3	821.1	825.2	828.7	830.6	830.6	832.6	834.5	835.0
10°	800.6	800.6	802.4	802.4	805.5	807.2	813.1	812.6	818.9	824.7	827.3
12.5°	798.9	798.9	798.0	794.8	793.1	792.6	798.4	799.2	808.7	818.9	823.7
15°	804.6	804.6	801.9	795.7	789.0	785.8	791.6	793.5	803.8	815.8	823.3
17.5°	823.3	822.8	817.1	804.6	793.1	788.2	789.9	791.6	801.0	814.9	824.3
20°	864.9	864.9	852.4	829.7	809.6	798.0	795.2	796.5	803.3	816.2	828.2
22.5°	937.7	939.0	916.7	879.3	844.8	820.2	809.6	810.9	814.0	826.5	839.8
25°	1044.8	1041.2	1009.5	956.4	902.8	860.8	838.9	840.4	840.4	852.0	865.7
27.5°	1158.3	1159.2	1113.5	1056.4	985.9	923.4	888.6	888.2	887.6	898.8	913.5
30°	1286.5	1286.8	1234.1	1168.1	1087.3	1007.3	955.1	954.5	950.5	964.4	983.6
32.5°	1426.6	1426.1	1365.0	1290.3	1200.7	1110.0	1042.2	1041.8	1038.6	1057.3	1080.5
35°	1581.9	1581.9	1521.2	1429.3	1332.4	1231.4	1152.9	1152.4	1154.2	1179.7	1201.6
37.5°	1769.0	1773.1	1699.9	1588.3	1482.5	1374.8	1283.3	1280.5	1267.1	1310.1	1346.2
40°	1964.1	1975.4	1899.5	1769.0	1654.8	1543.6	1442.7	1440.9	1429.3	1474.7	1533.2
42.5°	2175.3	2200.8	2116.4	1983.4	1858.9	1738.7	1637.3	1632.4	1587.8	1658.8	1750.3
45°	2452.3	2468.7	2346.5	2225.8	2108.4	1971.3	1850.8	1824.4	1779.8	1870.9	1989.7
47.5°	2640.7	2632.7	2556.2	2475.4	2400.0	2268.7	2083.3	2049.9	1995.4	2116.0	2246.8
50°	2757.5	2763.5	2720.5	2716.6	2712.5	2621.0	2346.0	2305.8	2242.8	2385.7	2538.4
52.5°	2835.0	2808.6	2816.0	2907.3	3017.4	2973.7	2642.9	2598.2	2533.5	2676.4	2848.7
55°	2802.7	2767.9	2837.9	3017.4	3276.8	3286.7	2968.8	2922.8	2867.5	2985.3	3222.0
57.5°	2669.7	2687.1	2797.9	3047.4	3454.2	3567.1	3343.4	3296.6	3187.5	3307.3	3576.5
60°	2482.6	2517.9	2687.1	3000.1	3578.3	3785.5	3754.6	3723.5	3535.9	3620.7	3948.9
62.5°	2281.7	2316.5	2524.5	2919.2	3522.4	3978.9	4158.3	4139.1	3920.4	3922.5	4185.2
65°	1984.7	1999.0	2211.5	2698.7	3367.6	4153.5	4562.4	4545.5	4287.8	4180.3	4251.1
67.5°	1498.9	1516.8	1691.4	2130.3	2896.0	4058.7	4885.3	4882.6	4508.9	4275.8	4094.0
69°	1106.9	1128.8	1271.2	1653.9	2394.6	3698.0	4900.4	4936.5	4568.6	4266.0	3828.3
70°	809.9	835.0	966.7	1312.8	1994.5	3299.7	4770.4	4848.2	4545.9	4203.9	3621.2
72.5°	344.3	352.8	417.5	592.5	1011.9	1989.7	3907.4	4070.8	4105.7	3766.8	2829.0
75°	215.7	218.4	243.8	304.0	450.1	822.8	2530.3	2753.1	3065.2	2922.4	1894.0
77.5°	162.6	164.7	179.5	209.5	279.6	307.2	1173.8	1399.7	1755.6	1719.0	942.6
80°	124.5	125.9	135.7	152.3	196.9	192.4	380.9	478.6	732.7	646.5	333.5
82.5°	97.7	98.3	106.7	109.9	137.5	129.4	191.1	213.0	296.0	246.0	163.0
85°	86.6	87.9	96.5	80.4	87.9	78.2	104.9	113.8	157.2	148.2	61.7
87.5°	44.1	46.4	80.8	68.8	44.1	37.1	46.1	49.5	63.9	69.2	30.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	861.7	861.7	861.7	861.7	861.7	861.7	861.7	861.7	861.7	861.7	861.7
2.5°	851.6	852.0	853.3	855.5	859.0	863.5	868.9	874.3	877.4	879.6	878.7
5°	844.3	844.8	847.6	851.6	855.9	862.6	871.5	878.3	883.3	886.3	885.9
7.5°	835.5	836.7	842.2	846.6	852.9	858.2	865.3	871.5	876.4	879.6	879.3
10°	828.7	830.0	836.7	842.6	847.9	848.8	847.6	845.7	845.2	847.6	846.6
12.5°	825.6	828.2	834.5	838.6	836.3	827.8	817.9	814.0	812.6	817.1	817.5
15°	826.5	828.7	834.0	831.4	819.3	805.1	799.8	802.8	805.5	808.1	808.7
17.5°	828.7	830.0	831.4	821.6	804.6	795.2	793.5	790.2	782.2	777.8	777.4
20°	832.6	834.5	832.3	816.6	801.5	789.0	767.5	748.4	730.1	720.3	716.2
22.5°	846.6	847.9	841.3	826.0	802.8	762.2	718.9	685.9	657.6	642.5	636.7
25°	873.8	876.0	866.7	847.6	786.7	715.8	654.5	609.9	574.6	556.3	551.4
27.5°	921.7	923.8	913.5	863.5	749.2	653.6	579.5	535.4	504.9	489.3	487.2
30°	993.0	996.1	986.8	863.1	692.1	574.6	506.4	480.5	463.0	452.2	451.8
32.5°	1092.2	1103.7	1065.4	847.9	621.5	494.7	450.9	442.1	433.5	426.4	426.4
35°	1218.1	1245.3	1143.1	816.2	543.8	440.3	420.1	411.7	401.0	393.4	392.5
37.5°	1368.6	1411.0	1198.3	760.0	476.9	413.8	401.5	387.6	370.6	355.9	352.2
40°	1575.3	1585.1	1225.6	668.3	426.9	399.7	383.9	366.6	345.2	328.6	326.9
42.5°	1782.9	1750.7	1220.3	570.2	398.3	386.7	366.1	346.9	327.7	313.9	313.9
45°	2019.1	1895.5	1179.7	471.5	372.3	372.0	349.6	331.4	316.6	306.3	304.0
47.5°	2245.0	2025.4	1109.5	398.8	345.6	357.2	338.9	324.2	310.8	300.9	299.1
50°	2519.1	2175.9	1034.9	347.9	319.6	344.3	334.3	326.9	313.9	296.9	295.2
52.5°	2791.6	2351.8	977.4	309.5	296.9	334.0	337.1	338.0	325.9	292.8	290.7
55°	3084.1	2539.7	916.7	279.6	278.1	329.0	343.3	342.4	336.7	293.7	290.2
57.5°	3362.1	2728.6	826.0	258.5	263.5	324.2	344.7	330.3	320.2	298.2	292.5
60°	3592.6	2884.8	693.0	243.8	250.9	314.3	335.7	314.3	296.9	297.3	291.9
62.5°	3704.7	2928.7	530.0	226.8	240.7	298.2	322.9	302.3	286.2	299.1	296.0
65°	3619.5	2804.1	377.7	211.2	228.2	279.6	315.2	291.9	280.9	308.1	304.5
67.5°	3313.0	2464.7	274.2	197.4	216.1	260.2	300.9	282.6	275.5	314.8	306.7
69°	2987.6	2128.1	237.5	189.4	207.6	250.1	291.6	277.8	271.5	305.5	293.7
70°	2717.1	1868.7	219.2	184.4	200.5	244.2	284.5	274.6	267.4	294.3	280.5
72.5°	1948.2	1207.9	184.4	169.7	181.7	231.4	268.9	263.1	252.2	265.7	256.7
75°	1177.0	630.5	156.8	154.5	162.1	213.4	250.4	243.4	232.7	234.0	229.4
77.5°	540.7	291.1	131.2	136.6	141.6	191.1	228.2	220.2	210.4	206.7	207.1
80°	237.2	170.0	109.9	116.5	119.3	171.8	204.1	195.1	184.4	203.6	188.9
82.5°	128.2	98.6	85.7	90.2	97.7	149.6	177.2	165.6	155.3	180.7	146.1
85°	51.8	50.5	58.0	62.5	67.8	107.5	148.2	136.3	123.6	110.8	108.1
87.5°	22.3	24.2	28.6	30.4	36.1	67.0	99.5	87.0	87.6	75.0	73.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)